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## DEVELOPMENT OF VITAL STATISTICS.

BY HENRY D. HOLTON, A.M., M.D., SECRETARY, STATE BOARD OF HEALTH,  
VERMONT.

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It is not necessary more than to allude to the fact that Vital Statistics are the basis upon which State and municipal sanitation rest. This was early recognized by the Colonies, as has been pointed out by Chapin. Virginia, in 1631, required that ministers and church wardens should report marriages, births, and deaths. In 1639 the Colony of Massachusetts adopted registration regulations, and seven years later the Plymouth Colony followed its example. Various municipalities required reports of vital statistics. In 1856 the legislature of Vermont placed on the statute book a law requiring the reporting of all marriages, births, and deaths. The school district clerks were required to visit every home in their respective districts in January, and, make careful inquiry as to the number of births and deaths that had occurred in the home during the year previous, and report the same to the town clerk. Ministers and magistrates were also required to report all marriages. The town clerk was to transmit all of these reports to the Secretary of State, who was required to receive the returns, and, with the assistance that might be voluntarily rendered to him by any authorized committee of the Vermont Medical Society, to prepare such tabular results as might render them of practical utility and report thereon to the legislature. This method of registration continued for forty-one years. Imperfect as it was in its methods, valuable data were preserved. In 1898 the registration law at present in operation was passed, although there have been slight amendments made to perfect its operation. No body of a human being can be buried, removed, or cremated, unless the local health officer first issues a permit for that purpose. The physician last in attendance upon a deceased person must immediately fill out a certificate of death, and within thirty-six hours deliver the certificate to the family or undertaker. The blanks for all certificates, under the Act, are furnished by the State Board of Health. The certificate of birth must be made by the physician or head of the family and returned within ten days to the town clerk, who receives and retains in his office, as the permanent record of the office, the certificates of marriages, births, and deaths. He is supplied by the State Board of Health with abstracts sheets on which he must return

semi-annually a copy of each certificate to the Secretary of the State Board of Health. (We hope soon to secure an amendment requiring the returns to the State Board to be made monthly.) The accuracy of the returns by this method is evidenced first, in that the ill-defined causes of death are less by two-thirds than under the former Act; second, in that all deaths are returned, as no body can be buried without a permit based upon the certificate of death.

Regarding the returns of births the case is quite different. The careless physician neglects to return births until the town clerk notifies him of his delinquency, although he receives twenty-five cents for each birth and death certificate returned. I am persuaded that in many instances the doctor who sits down weeks, and perhaps months, after a birth to make up his returns, fails to remember some of them: hence, they do not get reported. There are now only sixteen States that have a similar act requiring all marriages, births, and deaths to be reported. One of the first missions of this Section should be to urge upon the remaining States that they adopt similar laws, to the end that we may have uniformity throughout the nation. Agitation to show the importance of this registration should be continued until every State secures the required legislation.

With the standard required by the Census Bureau we may reasonably expect that this Section will be a very material power in bringing the vital statistics of the whole country much nearer a state of reliability and desired perfection. To this end the International Classification of Causes of Death should be revised during or before 1910.

The sanitarians of the country are to be congratulated upon the success that has attended their labors to improve the hygienic conditions under which we live to-day. The prevention of communicable diseases and the better sanitary conditions surrounding us have made it possible for a much larger number of persons to reach advanced age, although in the middle period of life the mortality from some organic diseases has increased. The "strenuous" life has much to do with the increasing death-rate from both organic heart disease and apoplexy. In short, we need to return to the "simple life," cultivating a broad, unselfish philanthropy in efforts to relieve the unfortunate and distressed, helping them to reach higher planes of mental and moral life, making it possible for them to live in sanitary homes and be surrounded by pleasant, healthy, uplifting influences other than those that tend to physical and moral degeneration.

In the small State of Vermont, where there is a greater equality of environment and methods of living than in a large municipality or in States with a greater diversity of general conditions, the vital statistics show more accurately the result of sanitary improvements.

It is interesting to learn from our registration of fifty years just what changes have taken place in this rural commonwealth in the causes of death. We find that in comparing the first registration report, made in 1857, with the last, for 1906, that, taking the deaths from the communicable diseases of typhoid fever, measles, scarlatina, whooping-cough, and tuberculosis in this State, there were in 1857 1,179 deaths or one to every 266 of the inhabitants. In 1906 there were 613, or only one to every 571 of the inhabitants. In 1857 tuberculosis alone caused the death of 848, or one in 370. In 1906 the deaths were 453, only one in 772. Typhoid fever in 1857 caused 169 deaths, one in 1,858. In 1906 there were only 70 deaths, being one in 5,000.

There has been an increase in certain diseases, as there has been throughout the country. In 1857 cancer caused 73 deaths, only one in 4,301 persons. In 1906 it added to the death-roll 287, or one in 1,219. Pneumonia in 1857 led with 163 deaths, or one in 1,926. In 1906 there were 575 deaths, or one in 608. In 1857 organic heart disease destroyed only 125, or one in 2,512 persons. In 1906 there were reported from this cause 577 deaths, or one in 606. Apoplexy in 1857 caused death in 71 cases, or only one in 4,422. In 1906 the number of deaths from this cause was 430, or one in 813.

We also find that in the first period only one person in 754 lived to be eighty years old or over, while in the last period one in every 425 was eighty or over.

The average age at death was, in the first period, 38; in the latter, 48. Fractions have been discarded in the above figures.

From these statistics we must be impressed that our duty in the future is a more rigid enforcement of means calculated to secure the absolute suppression of communicable diseases, with a continued effort in the direction of determining the cause of those diseases which continue, with increasing certainty, to decimate our people during middle life. To this end we would suggest that a committee be appointed to co-operate with a similar committee from the Laboratory Section, with a view to making a special effort to determine the causes of the diseases that our vital statistics indicate are so rapidly on the increase.